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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/669,285 | 09/24/2003 | Satoru Oishi | 1232-5165 | 6579 |
| 27123 | 7590 | 06/23/2005 | EXAMINER | |
| MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101 | | | LAU, TUNG S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2863 | |

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,285

Applicant(s)

OISHI ET AL.

Examiner

Tung S. Lau

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4 and 7-12 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/07/2005 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

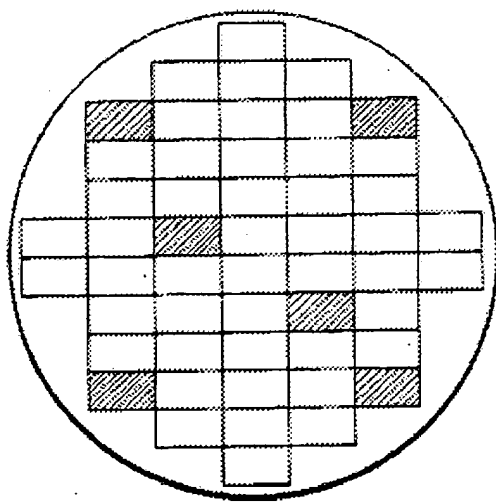
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al. (U.S. Patent 6,081,614).

Regarding claim 1:

Yamada discloses a position detecting method of detecting a position of a mask formed on an object (fig. 3), said method comprising the steps of: forming an image of a mark on a sensor (fig. 1, unit 19, 26); forming an image of mark on a sensor (fig. 1, unit 19, 26); performing a first processes an image signal obtained by the sensor with respect to each of plurality of values of a parameter of the first process (fig. 7, step 2); performing a second process that processes a signal

obtained by the first process to obtain a feature value with respect to each of the plurality of value of the parameter (fig. 7, step 5); determining a value of the a parameter based on feature value obtained by the second process and a reference value defined with respect to the mark (fig. 7, step 6); and detecting a position of the mark based on a signal obtained by the first process using the value of the parameter determined in said determining step (fig. 7, step 10-15).

**FIG. 3**

Regarding claim 10:

Yamada discloses a position detecting apparatus for detecting a position of a mark on an object (fig. 3) said apparatus comprising: a detecting system to detect an image of a mark (fig. 3); and a processing system to perform a first process that processes an image signal obtained by said detecting system with

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respect to each of a plurality of values of a parameter of the first process (fig. 7, step 2) to perform a second process that processes a signal obtained by the first process to obtain a feature value with respect to each of the plurality of value of the parameter (fig. 7, step 5), to determine a value of the parameter based on the feature values obtained by the second process and a reference value defined with respect to the mark (fig. 7, step 6), and to detect a position of the mark based on signal obtained by the first process using the determined value of the parameter (fig. 7, step 10-15).

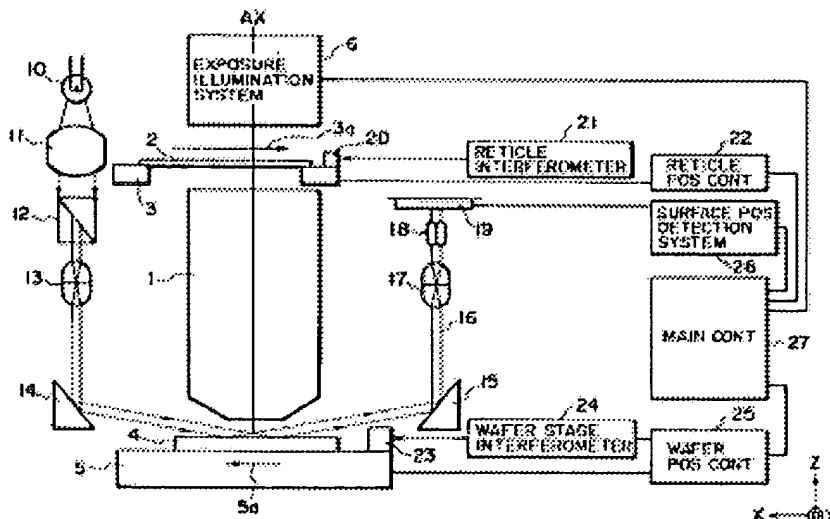


FIG. 1

Regarding claim 2, Yamada also discloses filtering including zero phase filter of the order of the filter (Col. 11, Lines 15-61); Regarding claim 3, Yamada also discloses using a polynomial of the first process comprises an order of the polynomial (Col. 11, Lines 15-61);

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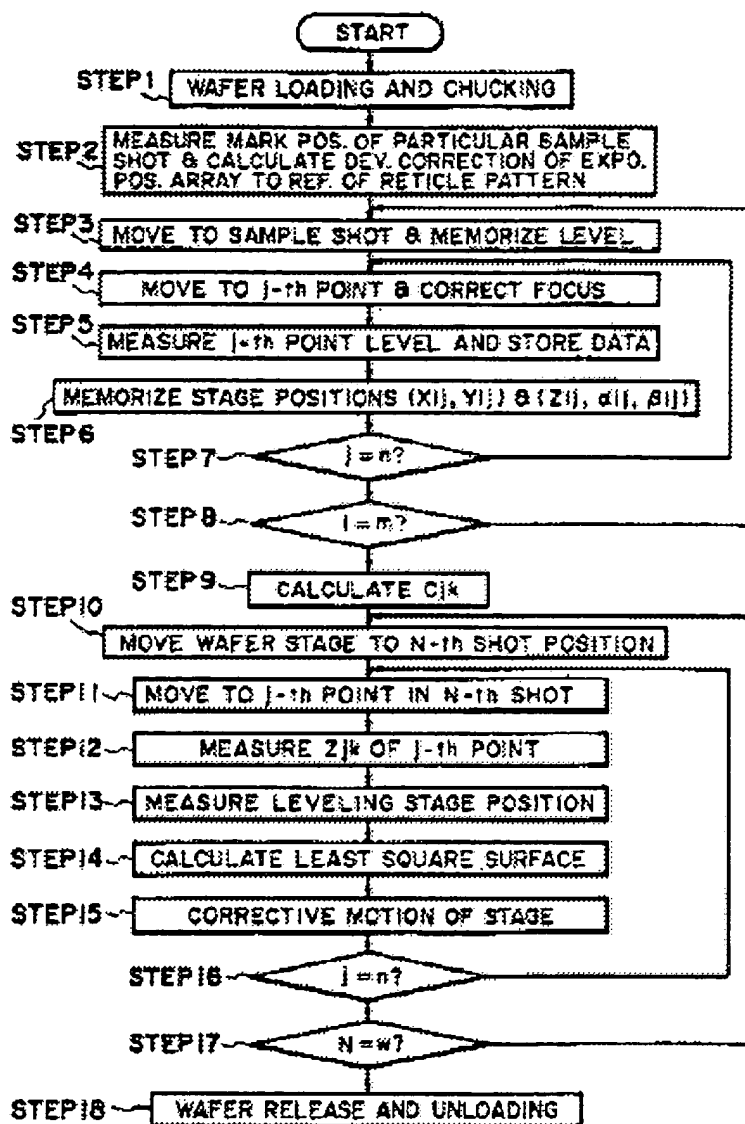


FIG. 7

Regarding claim 4, Yamada also discloses Feature value corresponds to an interval between elements of the mark (fig. 3); Regarding claim 7, Yamada also discloses deviation of the feature from the reference value (Col. 11, Lines 15-61, fig. 7, step 12-15); Regarding claim 8, Yamada also discloses variation of a plurality of features (fig. 7, step 11-15, fig. 2); Regarding claim 9, Yamada also

discloses removing noise (Col. 6, Lines 1-14); Regarding claim 11, Yamada also discloses detect a position mark formed on the object (fig. 2); Regarding claim 12, Yamada also discloses developing the pattern has been transferred (fig. 2, 4a, 4b) and processing the developed object to fabricate the device (fig. 9a-9c, 4a, 4b, Col. 7, Lines 30-40).

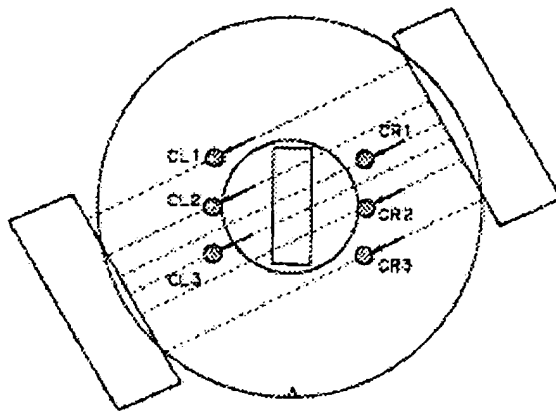


FIG. 2

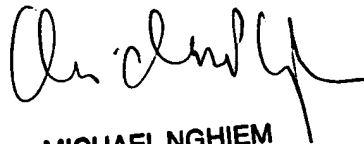
Response to Arguments

3. Applicant's arguments with respect to claims invention have been considered but are moot in view of the new ground(s) of rejection. However, applicant's arguments filed 06/07/2005 have been fully considered but they are not persuasive.
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

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John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL



MICHAEL NGHIEM
PRIMARY EXAMINER